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Amended Claims

1. A rewinder machine for the production of rolls of web material (N) wound around winding cores (A1-A4), comprising:
 - a first winding roller (3),
 - a second winding roller (5), defining with said first winding roller (3) a winding cradle,
 - a feeder (33) for sequentially introducing winding cores to said winding cradle,
 - a gluer (21) for applying glue on said cores,
- 5 10 15 20 25 30 35 40 45 50 55 60 65 70 75 80 85 90 95 100 105 110 115 120 125 130 135 140 145 150 155 160 165 170 175 180 185 190 195 200 205 210 215 220 225 230 235 240 245 250 255 260 265 270 275 280 285 290 295 300 305 310 315 320 325 330 335 340 345 350 355 360 365 370 375 380 385 390 395 400 405 410 415 420 425 430 435 440 445 450 455 460 465 470 475 480 485 490 495 500 505 510 515 520 525 530 535 540 545 550 555 560 565 570 575 580 585 590 595 600 605 610 615 620 625 630 635 640 645 650 655 660 665 670 675 680 685 690 695 700 705 710 715 720 725 730 735 740 745 750 755 760 765 770 775 780 785 790 795 800 805 810 815 820 825 830 835 840 845 850 855 860 865 870 875 880 885 890 895 896
2. A rewinder machine according to claim 1, characterized in that said feeder has two elongated members (39).
3. A rewinder machine according to claims 1 or 2, characterized in that said feeder includes two mobile arms (35) between which said at least one elongated member is supported.
4. A rewinder machine according to one or more of the previous claims, characterized in that said feeder (33) oscillates around an axis (37) substantially parallel to the axis of the winding rollers.
5. A rewinder machine according to one or more of the previous claims, characterized in that said elongated member is composed of a wire or a cable stretched between the two mobile arms.
6. A rewinder machine according to one or more of the previous claims, characterized in that an extractor member (53-62), for extracting a roll (R1) formed in said winding cradle, is mechanically linked to said feeder (33).
7. A rewinder machine according to claim 6, characterized in that said extractor member (53-62) oscillates around an axis parallel to the axis of at least one of said winding rollers.
8. A rewinder machine according to claim 7, characterized in that said extractor member is constrained around the axis of rotation (5A) of said second

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winding roller (5).

9. A rewinder machine according to claims 6 or 7 or 8, characterized in that said extractor member has a pick up surface (61 and 62) for rolls (R) to be unloaded from said winding cradle.

5 10. A rewinder machine according to claim 9, characterized in that said extractor member includes a pair of oscillating arms (59) articulated around the axis of rotation (5A) of the second winding roller (5), to which said pick up surface is rigidly constrained, and that said oscillating arms (59) are linked to said feeder (33) via tie rods (55) hinged to said arms and to said feeder.

10 11. A rewinder machine according to claims 9 or 10, characterized in that said pick up surface forms a picking chute (61) for said rolls.

12. A rewinder machine according to claims 9 or 10, characterized in that said pick up surface forms a rolling surface (62) for said rolls.

15 13. A rewinder machine according to one or more of claims 9 to 12, characterized in that said pick up surface (62) is shaped to insert itself between the roll and the second winding rollers, being substantially tangential to said second winding roller.

14. A rewinder machine according to one or more of the previous claims, characterized in that said feeder (33) is manually controlled.

20 15. A rewinder machine according to one or more of the previous claims, characterized in that said feeder is controlled by a main motor that also controls the rotation of said first and of said second winding rollers.

16. A rewinder machine according to one or more of claims 1 a 14, characterized in that said feeder is controlled by an independent actuator.

25 17. A rewinder machine according to one or more of the previous claims, characterized in that it includes a perforator (9) for perforating the web material along transversal perforation lines, and that said perforator is controlled by the same motor that controls said first and said second winding rollers.

30 18. A rewinder machine according to one or more of the previous claims, characterized in that said first and said second winding rollers are controlled to assume, during at least part of the winding cycle of a roll, mutually different peripheral speeds to facilitate introduction of the winding core through the nip defined between said first and said second winding rollers.

19. A rewinder machine according to claim 18, characterized in that the

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change in peripheral speed of said first and second winding roller with respect to each other is manually controlled.

20. A rewinder machine according to claims 18 or 19, characterized in that it includes a brake (101-107) for braking the second winding roller (5), 5 temporarily changing the peripheral speed of the second winding roller with respect to the peripheral speed of the first winding roller.

21. A rewinder machine according to claim 20, characterized in that said brake is manually operated via a control that also operates said feeder.

22. A rewinder machine according to one or more of the previous claims, 10 characterized in that it includes a feed channel (47) for the winding cores, said feeder (33) being equipped with a retaining surface (51) that holds the cores in said feed channel.

23. A rewinder machine according to one or more of the previous claims, characterized in that it includes a third winding roller (8) with a moveable axis.

15 24. A rewinder machine according to one or more of the previous claims, characterized in that a gluing device (21) is arranged downstream of said first and second winding rollers for gluing the free end edge of the roll.

25. A rewinder machine according to claim 24, characterized in that said gluer is manually controlled.

20 26. A rewinder machine according to claims 24 or 25, characterized in that said gluing device has a support surface for the roll to be glued, with an opening (31) defining a position of equilibrium for said roll, and with a mobile element (23) for distributing the glue arranged beneath said opening.

27. A rewinder machine according to claim 26, characterized in that said 25 mobile glue distribution element is operated by a manual control (27).

28. A machine according to one or more of claims 24 to 28, characterized in that it includes a pair of tie rods (65 and 66), controlled by the same drive shaft (63) used for controlling the movement of the feeder and the movement of said gluing device (21).

30 29. A machine according to claim 28, characterized in that said two tie rods are controlled by a pedal (60).

30. A machine according to one or more of the previous claims, characterized in that one of said winding rollers has a pliable cylindrical surface (5B).

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31. A method for producing rolls of web material wound around winding cores: in which

- a first roll (R1) is completed in a winding cradle,
- upon termination of winding said first roll, a new winding core (A2) is inserted via a feeder (33) to said winding cradle and the first roll is unloaded from the winding cradle, with glue being applied to said new winding core,
characterized in that said glue is applied on said new winding core via said feeder (33), which is immersed at least partially in a container of glue and lifted from it to pick the new winding core, said feeder pushing said winding core into a nip defined between a first and a second winding roller.

32. A method according to claims 31, characterized by extracting the winding core from the finished roll and recycling it for a subsequent winding cycle.

33. A rewinder machine for the production of rolls of web material (N) wound around winding cores (A1-A5), comprising:

15 • a first winding roller (3),
• a second winding roller (5), defining with said first winding roller (3) a winding
cradle,
• a feeder (33) for sequentially introducing winding cores to said winding
cradle,

20 characterized in that an extractor member (53-62), for extracting a roll formed in
said winding cradle, is mechanically linked to said feeder (33).

34. A rewinder machine according to claim 33, characterized in that said extractor member oscillates around an axis parallel to the axis of at least one of said winding rollers.

25 35. A rewinder machine according to claim 34, characterized in that said extractor member is constrained around the axis of rotation (5A) of said second winding roller (5).

36. A rewinder machine according to claims 33 or 34 or 35,
characterized in that said extractor member has a pick up surface (61 and 62) for
30 rolls (R) to be unloaded from said winding cradle.

37. A rewinder machine according to claim 36, characterized in that said extractor member (53-62) includes a pair of oscillating arms (59) articulated around the axis of rotation (5A) of the second winding roller (5), to which said pick up surface is rigidly connected, and that said oscillating arms (59) are linked to

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said feeder (33) via tie rods (55) hinged to said arms and to said feeder.

38. A rewinder machine according to claims 36 or 37, characterized in that said pick up surface (61) forms a picking cradle for said rolls.

39. A rewinder machine according to claims 36 or 37, characterized in 5 that said pick up surface (62) forms a rolling surface for said rolls.

40. A rewinder machine according to one or more of claims 36 to 39, characterized in that said pick up surface (62) is shaped to insert itself between the roll and the second winding roller, being substantially tangential to said second winding roller.

10 41. A machine according to one or more of claims 33 to 40, characterized in that one of said winding rollers has a pliable cylindrical surface (5B).

15 42. A machine according to one or more of claims 33 to 41, characterized by a pair of tie rods (65, 66), controlled by a common drive shaft (63) used for controlling the movement of the feeder and the movement of said gluing device (21).

43. A machine according to claim 42, characterized in that said two tie rods are controlled by a pedal (60).

20 44. A method for producing rolls of web material wound around the winding cores: in which

- a first roll (R1) is completed in a winding cradle,
- upon termination of winding said first roll, a new winding core (A2) is inserted via a feeder (33) to said winding cradle and the first roll is unloaded from the winding cradle via an extractor member (51-61),

25 characterized by controlling said feeder and said extractor member via a common member.

45. A rewinder machine for the production of rolls of web material (N) wound around winding cores (A1-A5), comprising: a first winding roller (3); a second winding roller (5), defining with said first winding roller (3) a winding cradle; 30 a feeder (33) for sequentially introducing winding cores to said winding cradle; a gluer (21) for gluing the free end edge of the rolls made by said machine, characterized in that a common actuator member (60) controls the movement of said feeder and of said gluer (21).

46. A rewinding machine for the production of rolls of web material (N)

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wound around winding cores (A1-A5), comprising only two winding rollers (3, 5) forming a winding cradle, on which rolls of web material are sequentially formed, wherein said web material is fed continuously to said cradle, said winding rollers being kept into rotation during discharge of a completed roll and insertion of a new 5 winding core.

47. A rewinding machine according to claim 46, wherein said cores and said web material are fed through a nip (7) formed between said two winding rollers (3, 5).

48. A method for subsequently forming rolls of web material wound 10 around winding cores, including the steps of:

- providing a first winding roller and a second winding roller forming a winding cradle;
- continuously feeding said web material to said winding cradle to form a roll in said cradle, said roll being formed by contacting it with only said two winding 15 rollers;
- upon completion of said roll, discharging said roll from said cradle, inserting a new core in said cradle and severing said web material, without interrupting feeding of said web material.